

## PATENT ABSTRACTS OF JAPAN

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## (54) FILTER DEVICE USING PERMEATION MEMBRANE

## (57)Abstract:

**PURPOSE:** To filter water for treatment using a micro-filter membrane and an ultrafiltration membrane.

**CONSTITUTION:** In a filter device for water treatment using a hollow fiber permeation membrane such as a micro-filter membrane or an ultrafiltration membrane, a permeation membrane module 4 is installed vertically or obliquely, the supply water is allowed to flow past from below upward, and an air vent valve 15 is provided communicating with a hollow fiber supply side right above a permeation membrane module 4. In addition, a cleaning/water drain valve 9 is provided below the permeation membrane module 4, and the valve 9 is opened when cleaning by reverse flow and draining water. Thus the reverse cleaning drain water is discharged from the supply water side of the permeation membrane module 4 to an area outside the system by natural flow downward.

